ACCOMPLISHMENTS

State and federal assistance to support local watershed restoration efforts has already resulted in significant benefits for the threatened salmonid populations. Building on the success of these efforts, highlighted below, local entities will continue to work cooperatively to develop innovative, effective restoration projects to save these imperiled species.

The Costa-Machado Water Act of 2000 (Proposition 13) included $1 million for the County of Sonoma to help protect, restore and enhance the environmental and economic value of the Russian River watershed within Sonoma County's boundaries. At the direction of the Sonoma County Board of Supervisors, the Sonoma County Water Agency developed the Russian River Watershed Project Evaluation Team to establish criteria, invite and evaluate proposals, and make recommendations to the Board regarding watershed restoration projects to receive funding from Proposition 13 funds. The team consisted of nine representatives from local watershed groups, the agricultural community, legislative and regulatory agencies, and SCWA staff. Nine projects were selected for funding, with amounts ranging from $5,400 to $400,000. In an effort to expedite the processing of the grant contracts, SCWA has offered to administer the grant funds through the State Water Resources Control Board. SCWA staff may also provide assistance for the development of the project recipients' required environmental documents and permitting activities.

Santa Rosa Creek Prince Memorial Greenway - Phases I - III has restored critical steelhead habitat along 2/3 of a mile of Santa Rosa Creek. Phase IV of the project is anticipated to be constructed in 2003. This project enhances habitat by resloping the creek banks; removing grouted rip-rap; installing rock wing deflectors, redwood log habitat structures and boulder weirs to create pools, riffles and glides; creating a defined low flow channel; and revegetating the channel bottom and banks. Once completed, the Prince Memorial Greenway Project will include a bike path on the north side of the creek and walking paths on both sides. The project will be part of a greater trail plan that, when completed, will connect the recreation and open space areas of Annadel State Park and Spring Lake Regional Park to the Laguna de Santa Rosa.

Copeland Creek Restoration included restoring riparian and salmonid habitat along more than a mile of creek. A century of intensive cattle grazing had eliminated most native plants, resulting in degraded habitat. Restoration included constructing more than 8,000 feet of cattle exclosure fencing, recontouring heavily eroded creek banks, protecting banks with willow baffles (i.e. rows of living willow sprigs) and rock boulders, and revegetating the riparian habitat with more than 4,000 native plants. The project began in fall 2001 and was completed in fall 2002.

The **Healdsburg War Memorial Dam Fish Ladder** has aided upstream passage of threatened salmonid species and other migratory fish during periods of low flow on

the Russian River, when the dam's flashboards are not in operation. Easing the efforts of these fish during their migration periods provides the species the opportunity to conserve strength and may potentially allow species to swim further upstream and extend potential breeding habitat. The fish ladder, consisting of an "Ice Harbor" style pool and weir ladder, contains 13 steps and includes a 30-inch diameter water attraction pipe. This project, completed in 2001, was a cooperative effort between the California Department of Fish and Game (CDFG), Sonoma County Regional Parks Department, National Marine Fisheries Service (NMFS) and SCWA.

Construction of the **Mirabel Heights Water Pollution Control** project has corrected an existing health hazard in the Mirabel Heights community along the Russian River, and eliminated the potential for groundwater contamination resulting from failing septic systems. The project, consisting of a conventional gravity collection sewer system with a connection to the Forestville County Sanitation District Wastewater Treatment Facility, was a cooperative effort between the Forestville County Sanitation District, U.S. Department of Agriculture Rural Development Department, Sonoma County Community Development Commission, California State Water Resources Control Board and SCWA. The project was completed in 2000.

In July 2001, the Board of Directors of the Sonoma County Agricultural Preservation and Open Space District approved the acquisition of a conservation easement over the **Cooley Ranch**. In November 2001, the Board of Directors of the Sonoma County Water Agency approved funding to assist with the acquisition. The easement, of more than 19,064 acres of land in northern Sonoma County and southern Mendocino County, will protect the watersheds of five tributaries to Dry Creek, the main source of Lake Sonoma's water supply. The acquisition of the easement provides the county with an opportunity to protect the quality of the stored water in Lake Sonoma by restricting agrichemical use; providing a buffer between agriculture and creeks; restricting timber harvest in the area; encouraging restoration and enhancement efforts to provide bank and soil stabilization and reduce erosion; encouraging removal of non-native plants; restricting the off-road use of motorized vehicles; restricting dumping; and imposing other land use restrictions. This acquisition was a cooperative effort between the Sonoma County Agricultural Preservation and Open Space District and SCWA.

The **Mumford Dam Fish Passage and Riparian Restoration** project improves fish passage over the Mumford Dam on the upper Russian River. The streambed below the dam has down-cut 8 to 15 feet, restricting access to approximately 50 miles of salmonid spawning and rearing habitat above the dam. The project improves streambank stability and riparian habitat near the dam. A cooperative effort between SCWA, CDFG, and private landowners in the region, project funding was provided by CDFG from California's Proposition 13 and the Pacific Coastal Salmon Fund. Construction and revegetation will be completed by the end of 2003.

The objective of the **Crocker Creek Dam Removal** project is to restore anadromous fish, primarily steelhead, access to the Crocker Creek watershed while stabilizing streambanks in the vicinity of the dilapidated Crocker Creek dam on the Russian River near Asti. The project includes removal of the remaining dam

infrastructure, recontouring the streambanks to a more stabile profile, constructing a series of weirs to facilitate fish passage, and revegetating with native plants. The project is a cooperative effort between SCWA and CDFG, and was made possible by a grant through the Pacific Coastal Salmon Fund and California's Proposition 13. The project is under construction.

The **Big Austin Creek Restoration** project restored salmonid habitat degraded by historic mining upstream of the site. Activities included a basin hydrology study, streambank stabilization, construction of willow baffles and revegetation. This project was a cooperative effort between SCWA and the U.S. Fish and Wildlife Service and was completed in 2000.

In 1999, the Sonoma County Water Agency began developing the **Russian River Coho and Steelhead Population Monitoring** program to determine long-term trends in salmonid abundance. Coho salmon and steelhead populations in the Russian River basin have declined dramatically over the last 100 years. However, comprehensive surveys have never been conducted, making it difficult to document the decline or accurately track recent population trends. In cooperation with CDFG and NMFS, SCWA conducted electrofishing and/or snorkel surveys in the mainstem and three tributaries of the Russian River to evaluate sampling protocols and fish numbers. This is an ongoing project, with four years of sampling documented.

The completion of the **Forestville County Sanitation District's Advanced Wastewater Treatment Upgrade** project will improve the quality of effluent discharged from the treatment facility into Green Valley Creek, which provides habitat for federally listed coho salmon and steelhead. The project brings the treatment facility into compliance with the Russian River Basin Plan and state Regional Water Quality Control Board discharge requirements, and encourages the beneficial use of recycled water for irrigation and agricultural use. The project is expected to be completed in the fall of 2003, and is a cooperative effort between the Forestville County Sanitation District and SCWA.

The **Habitat Mapping** project being conducted by the California Department of Fish and Game (CDFG) is designed to provide an assessment and inventory of habitat within the Russian River watershed. Comprehensive stream surveys identify and plot such stream characteristics and habitat systems as pools, riffles and runs, riparian cover, stream temperatures and flow, vegetation, in-stream structures and culvert entries. Data collected from the stream surveys are compiled in a GIS mapping program and database. This project will identify limiting factors to salmonid abundance in the Russian River watershed and assist in prioritizing restoration efforts in the watershed.

In the fall of 2002, the Sonoma County Board of Supervisors approved the acquisition of a former gravel mining site from **Hanson Aggregates**. Comprised of 304 acres in northwest Sonoma County, this property includes a redwood grove, riparian habitat and marshland, and features three lakes. Hanson Aggregates has already begun implementing a plan to restore the riparian and wetland habitats. It is anticipated that, once restoration is completed, this property will provide passive public recreation along the Russian River, while being preserved as permanent open space. Management of the property will be a cooperative effort

between the Sonoma County Regional Parks Department, Sonoma County Agricultural Preservation and Open Space District and SCWA.

For each of the past three years, the Sonoma County Grape Growers Association has sponsored a meeting on **Integrated Pest Management (IPM)**. These meetings, held in the Dry Creek, Alexander and Russian River valleys, focus on teaching the IPM principle of monitoring to determine pest and predator presence. If pest pressures are an economic threat, growers are encouraged to use less-toxic pesticides or herbicides or to reduce the use of chemicals through spot treatments, reduced application rates or narrowing the treatment area. Such efforts to educate growers regarding pesticide and herbicide use have resulted in declining pesticide use, even as the number of "grape-growing" acres in the region has continued to increase. Reduced use of agricultural chemicals within the watershed is an important step in improving and protecting water quality.

Private landowners within the Russian River watershed have also demonstrated a commitment to the protection and restoration of the watershed. **Clos du Bois Winery**, located north of Healdsburg, has implemented riparian restoration efforts along both the main stem of the Russian River and Lytton Creek. Clos du Bois increased its required riparian setback by 25 feet in its vineyards along these waterways. The winery also revegetated these riparian areas with native plantings. Clos du Bois is continuing its efforts to restore the watershed by participating in Circuit Rider Productions' arundo donax removal project to eradicate this invasive species from its riparian corridors.

By establishing watershed protection as a guiding principle for projects within their jurisdiction, communities can establish a framework for combining economic growth and environmental stewardship. Local communities can also sometimes make their limited funding stretch further by incorporating restoration efforts into other projects, such as infrastructure improvements. The **City of Ukiah** completed and adopted a creek habitat enhancement and flood control study for Orrs Creek and a habitat enhancement and public access study for Gibson Creek. A habitat enhancement and public access study for Doolin Creek is expected to be completed and adopted shortly. These creeks flow though the City of Ukiah and are tributaries to the Russian River.

The **Town of Windsor Recycled Water Projects** will increase distribution of treated wastewater to reduce reliance on water from the Russian River watershed and local groundwater. These projects, the Windsor Golf Course, Windsor High School, Windsor Town Green and Vintage Greens Residential Subdivision, will save an estimated 113 million gallons of potable water per year. Through these projects, treated waterwater from regional wastewater treatment facilities is utilized for irrigation of recreation areas and commercial and residential landscaping, as well as flushing toilets at Windsor High School. These projects also improve water quality in the Russian River by reducing discharges of treated wastewater into local surface waters.

The **Brush Creek Restoration** project was completed in 1999 as a cooperative effort between the City of Santa Rosa and the Sonoma County Water Agency to restore fish and wildlife habitat along a 1,000-foot reach of Brush Creek. In the

1960's this reach of creek was channelized, enlarged, and straightened to prevent flooding. The loss of habitat diversity and riparian vegetation severely impacted steelhead and other wildlife species. The project's habitat enhancement features included recontouring creek banks; creating a defined low flow channel; improving instream habitat by installing boulder weirs, rootwads, and planting the riparian area with native plantings while maintaining the flood capacity of the channel.